AWAPATENT

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VÄLINGE ALUMINIUM AB
European Patent Application No.94915725.9-2303

Dear Sirs,

Further to my letter dated 23 February 1998, new claims 1-22 are hereby enclosed in triplicate. The only difference between the new claims hereby submitted and the claims 1-20 submitted by my letter dated 23 February 1998, is that the new claims includes two new dependent claims 21 and 22. No other amendments or additions have been made.

The two new dependent claims 21 and 22 are directed especially to the embodiment and laying sequence illustrated e.g. in Fig 2a-2c, where the two panels during laying are held in mutual contact at the upper part of the adjacent joint edges during the angularly movement. New dependent claim 21 states that the first mechanical connection as well as the second mechanical connection are such that they allow the locking element to enter the locking groove if the groove panel is turned about its joint edge angularly towards the strip while holding the upper part of the joint edge of the groove panel in contact with the upper part of the joint edge of the strip panel. New dependent claim 22 states that the same contact can be maintained also when turning the panel upwards.

The two new dependent claims 21 and 22 are fully supported by the application as filed and, therefore, do not violate Article 123(2) EPC. Especially, support can be found in Figs. 2a-2c and in the corresponding text on page 16, lines 5-22. Reference can be made also to page 9, line 6 ("pressed against"), page 10, lines 7-14 ("...then moving the groove panel with its long side up to the long side...brought into engagement..."), page 13, lines 2-5 ("...the strip panel 2

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of Fig. 1a is pressed with its joint edge against the joint edge 3 of the strip panel 1 and is angled down..."), and page 14, lines 6-8 ("...can be taken up in the reverse order...").

If there should be any objections under Article 123(2) EPC on the two new dependent claims, the Examiner is respectfully asked to contact the undersigned as soon as possible.

Yours faithfully,

Sören Giver
Authorised Representative
AWAPATENT AB

Encl.
New claims 1-22 in triplicate

CLAIMS

1. A system for providing a joint along adjacent joint edges (3, 4) of two building panels (1, 2), especially floor panels, in which joint:

the adjacent joint edges (3, 4) together form a first mechanical connection locking the joint edges (3, 4) to each other in a first direction (D1) at right angles to the principal plane of the panels (1, 2), and

a locking device (6, 8, 14) arranged on the rear side (18, 16) of the panels (1, 2) forms a second mechanical connection locking the panels (1, 2) to each other in a second direction (D2) parallel to the principal plane and at right angles to the joint edges (3, 4), said locking device (6, 8, 14) comprising a locking groove (14) which extends parallel to and spaced from the joint edge (4) of one (2) of said panels, termed groove panel, and which is open at the rear side (16) of the groove panel (2), c h a r a c t e r i s e d in

that the locking device (6, 8, 14) further comprises a strip (6) integrated with the other (1) of said panels, termed strip panel, said strip (6) extending throughout substantially the entire length of the joint edge (3) of the strip panel (1) and being provided with a locking element (8) projecting from the strip, such that when the panels are joined together, the strip (6) projects on the rear side of the groove panel (2) with its locking element (8) received in the locking groove (14) of the groove panel (2),

that the panels, when joined together, can occupy a relative position in said second direction (D2) where a play (Δ) exists between the locking groove (14) and a locking surface (10) on the locking element (8) that is facing the joint edges and is operative in said second mechanical connection,

that the first and the second mechanical connection both allow mutual displacement of the panels (1, 2) in the direction of the joint edges (3, 4), and

that the second mechanical connection is so conceived as to allow the locking element (8) to leave the locking groove (14) if the groove panel (2) is turned about its joint edge (4) angularly away from the strip (6).

2. A system as claimed in claim 1, c h a r a c t e r i s e d in that when the groove panel (2) is pressed against the strip panel (1) in said second direction (D2) and is turned angularly away from the strip (6), the maximum distance between the axis of rotation of the groove panel (2) and the locking surface of the locking groove (14) closest to the joint edges is such that the locking element (8) can leave the locking groove (14) without contacting the locking surface of the locking groove (14).

3. A system as claimed in claim 1 or 2, c h a r a c t e r i s e d in that the locking surface (10) of the locking element (8) is extended from the front side (22) of the strip (6) through a height in said first direction that is less than or equal to 2 mm.

4. A system as claimed in any one of the preceding claims, c h a r a c t e r i s e d in that the first mechanical connection is provided by the joint edge (4) of the groove panel (2) engaging, in said first direction, between the joint edge (3) of the strip panel (1) and the front side of the strip (6).

5. A system as claimed in any one of the preceding claims, c h a r a c t e r i s e d in that the strip (6) integrated with the strip panel (1) is made of a material different from that of the strip panel (1) and fixedly mounted on the strip panel (1) at the factory.

6. A system as claimed in claim 5, c h a r a c t e r i s e d in that the strip (6), at least for one of the two panels (1, 2), is received in a countersunk

groove (40; 42) in the rear side (18; 16) of this one panel (1; 2).

7. A system as claimed in claim 5 or 6, c h a r - a c t e r i s e d in

that the strip (6) is mounted in an equalising groove (40) which is countersunk in the rear side (18) of the strip panel (1) and exhibits an exact, predetermined distance (E) from its bottom to the front side (21) of the strip panel (1),

that the part of the strip (6) projecting behind the groove panel (2) engages a corresponding equalising groove (42) which is countersunk in the rear side (16) of the groove panel (2) and which exhibits the same exact, predetermined distance (E) from its bottom to the front side (26) of the groove panel (2), and

that the strip (6) has at least such a thickness that the rear side (44) of the strip is flush with the rear sides (18, 16) of the panels.

8. A system as claimed in claim 7, c h a r a c - t e r i s e d in that the strip (6) has such a thickness that it is only partly received in the equalising grooves (40, 42).

9. A system as claimed in any one of claims 5-8, c h a r a c t e r i s e d in that the strip (6) is fixed to the strip panel (1) by means of a mechanical connection.

10. A system as claimed in claim 9, c h a r a c - t e r i s e d in that the mechanical connection between the strip (6) and the strip panel (1) comprises a gripping edge (52) defined by two recesses (24, 50) in the rear side (18) of the strip panel, and tongues, lips or the like (54, 56) which are bent or punched from the strip (6) and which press against opposite outer sides of the gripping edge (52).

11. A system as claimed in claim 9, c h a r a c - t e r i s e d in that the mechanical connection between the strip (6) and the strip panel (1) comprises a recess

(58) in the rear side (18) of the strip panel, and tongues, lips or the like (60) which are bent or punched from the strip (6) and which press against opposing inner sides of the recess (58).

12. A system as claimed in any one of claims 5-11, c h a r a c t e r i s e d in that the strip (6) is fixed to the strip panel (1) by means of a binder.

13. A system as claimed in any one of claims 5-12, c h a r a c t e r i s e d in that the strip (6) is made of a flexible, preferably resilient material, such as sheet aluminium.

14. A system as claimed in any one of claims 1-4, c h a r a c t e r i s e d in that the strip (6) is integrally formed with the strip panel (1), i.e. made in one piece with the strip panel (1).

15. A system as claimed in any one of the preceding claims, c h a r a c t e r i s e d in that the locking element (8) consists of a locking edge extended continuously along the strip (6).

16. A system as claimed in any one of claims 1-14, c h a r a c t e r i s e d in that the locking element (8) consists of a plurality of spaced-apart locking elements distributed throughout the length of the strip (6).

17. A system as claimed in any one of the preceding claims, c h a r a c t e r i s e d in that the panels (1, 2) are rectangular and intended, at each of their four edges (3, 4, 3', 4'), to be joined to a similar panel by a first mechanical connection of the aforementioned type and a second mechanical connection of the aforementioned type, each panel having a first pair of opposite joint edges (3, 4), one of which is provided with a strip (6) of the aforementioned type and the other of which is provided with a locking groove (14) of the aforementioned type, and a second pair of opposite joint edges (3', 4'), one of which is provided with a strip (6') of the aforementioned type and the other of which is provided with a locking groove (14') of the aforementioned type.

18. A system as claimed in any one of the preceding claims, characterised in that an underlay (46) of floor boards, foam, felt or the like is fixed to the rear sides (18, 16) of the panels.

19. A system as claimed in claim 18, characterised in that the underlay (46) is fixed so as to cover the strip (6) in said second direction at least up to the locking element (8), such that a joint between the underlays (46) of the two adjacent panels is offset in said second direction relative to the joint edges (3, 4).

20. A system as claimed in any one of the preceding claims, characterised in that a sealing means, such as a sealing compound, a rubber strip or the like, is provided on the front side (22) of the strip between the locking element (8) and the joint edge (3) of the strip panel to seal against the groove panel (2).

21. A system as claimed in any one of the preceding claims, characterised in that the first mechanical connection as well as the second mechanical connection are such that they allow the locking element (8) to enter the locking groove (14) if the groove panel (2) is turned about its joint edge (4) angularly towards the strip (6) while holding the upper part of the joint edge (4) of the groove panel (2) in contact with the upper part of the joint edge (3) of the strip panel (1).

22. A system as claimed in any one of the preceding claims, characterised in that the first mechanical connection as well as the second mechanical connection are such that they allow the locking element (8) to leave the locking groove (14) if the groove panel (2) is turned about its joint edge (4) angularly away from the strip (6) while holding the upper part of the joint edge (4) of the groove panel (2) in contact with the upper part of the joint edge (3) of the strip panel (1).